- Figure 2 is a diagrammatic representation of a geophysical data acquisition system according to a second known type of architecture different from the type of Figure 1,
- Figure 3 is a diagrammatic representation of a geophysical data acquisition system architecture according to the invention,
- Figure 4 is an exploded diagrammatic view of the main components of a first embodiment of a casing of a system according to the invention,
- Figures 5a and 5b are two sectional diagrammatic views of two variants of a second embodiment of a casing of a system according to the invention,
- Figures 6a and 6b are a perspective view and an exploded view of a third embodiment of a casing of a system according to the invention.

With reference to Figure 3, there is represented a geophysical data acquisition system S'' according to the invention.

Like the known systems, it comprises a plurality of tracks T(i) linked to data storage means (not represented) by way of a cable C''.

More precisely, like in the monotrack systems, each track T(i) is linked individually to a respective casing B''(i).

However, in contrast to the known systems represented in Figures 1 and 2, no connector for electrical linking with the central processing unit or the interlinking of the casings is fixed on the casings. In the system according to the invention, each casing B''(i) is associated with two cable sections C''(i) and C''(i+1) for electrical connection with the neighboring casings.

The two cable sections C''(i) and C''(i+1) are fixed on the casing B''(i), preferably being aligned on either side of the casing. The structure of the link between the cable sections and the casing will be described with reference to Figures 4, 5a, 5b and 6b.

Each cable section C''(i) is furnished at a first end with means of coupling with a casing B''(i), the second end of the section C''(i) possibly being identical to the first and also being furnished with means of coupling with a casing, or else comprising an electrically and mechanically hermaphrodite connector 30 which can be connected to another identical connector.

The casings B''(i) are thus linked in series by way of the means of end coupling of the cable sections, to constitute modules 40 whose two ends are furnished with a connector 30 for coupling R'' with the neighboring module.

The module 40 represented in Figure 3 comprises four casings B''(i) each linked to a track T(i). According to the invention, the number of casings of a module may be arbitrary, the module possibly comprising just a single casing, or several thereof.

It is therefore understood that:

- on the one hand, the number of couplings R'' is divided by two as compared with the known systems comprise the fewest couplings (multitrack systems). Specifically, the implementation of an N-track multitrack system requires two couplings per casing, and hence 2/N couplings per track. In the system according to the invention, this ratio is still divided by two, to a value of 1/N coupling per track.
- on the other hand, the casings B''(i) do not directly carry connectors, thereby making it possible to

design them with reduced size, as will be seen with reference in particular to Figure 4.

With reference now to Figure 4, there is represented an exploded view of a casing B'' of an acquisition system according to the invention with its two identical cable sections C''(i) and C''(i+1).

The section C''(i) comprises in its sheath 130 the assembly of electrical conductors required for coupling with the central processing unit or with other casings B'', so as to convey the data emanating from sensors linked to the casings of the acquisition system.

This section is furnished at a first end remote from the casing with a connector, not represented in the figure, which can be mechanically and electrically coupled with an identical connector secured to another casing or to a central processing unit.

The second end of the section C''(i) is coupled electrically to means of processing the signals fixed on a rigid plastic insert (the insert and its processing means not being represented). These processing means can in particular comprise overvoltage limiters (which may use spark arresters).

The sheath of the section C''(i) is also engaged in a conduit of the insert in which the section C''(i) follows an "S" route so as to bypass baffles inside the conduit. Thus the section C''(i) and the insert are also mechanically secured (the baffles of the conduit defining passages whose width is scarcely greater than the diameter of the sheath of the cable section), their mechanical link being able to withstand a tension of the order of 500 Newtons.